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TI Hair rinse compositions containing nonionic surfactants and cationic surfactants

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AB The compns. contain (A) oily components, (B) nonionic surfactants, (C) cationic surfactants, and ≤ 15 weight% H₂O. The nonionic surfactants are preferably glycerin mono or di fatty acid esters or polyoxyethylene sorbitan fatty acid esters. The rinse compns. are diluted with warm water and applied to hair and keep hair soft and smooth during rinsing. A rinse containing lauryltrimethylammonium chloride, stearyltrimethylammonium chloride, cetanol, polyoxyethylene sorbitan tetraoleate, sorbitan monooleate, glycerin monocaprylate, liquid paraffin, perfume, and paraben was formulated.

DETAILED DESCRIPTION

[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention can be uniformly applied to hair, and its rinse effect is high and it relates to the hair rinsing agent composition excellent in the durability of a using feeling and an effect.

[0002]

[Description of the Prior Art] Generally, a hair rinsing agent composition contains a cationic surfactant, oil, etc.

These ingredients stick to hair, smooth the surface of hair, receive as a comb, prevent static electricity, and reveal the function of protecting the surface of hair.

Such a hair rinsing agent composition is used by rinsing, after applying to the hair after a shampoo.

[0003] However, since the conventional hair rinsing agent composition was what is used for hair direct-applying or lengthening, it was difficult to apply to the whole hair uniformly. In the case of long hair, there is a problem of it being more difficult and also taking time and effort, especially. When it was in the state where the hair rinsing agent composition is not applied uniformly and having been rinsed, the problem of decreasing remarkably was also effective.

[0004] When it was going to dilute and use the conventional hair rinsing agent composition, it was impossible for oil to have floated, or for some ingredients to have precipitated and to have distributed water etc. uniformly from the description.

[0005]

[Problem(s) to be Solved by the Invention] Therefore, the purpose of this invention can be uniformly applied to hair, and its rinse effect is high and there is in providing the hair rinsing agent composition excellent in the durability of a using feeling and the rinse effect.

[0006]

[Means for Solving the Problem] If this invention persons use in this actual condition combining an oily component, a nonionic surfactant, and a cationic surfactant as a result of inquiring wholeheartedly, When it diluted in water, self-emulsification was carried out, uniform dispersion was carried out in an instant, simple, it could apply to hair uniformly, and the rinse effect was high, it found out that a hair rinsing agent composition excellent in the durability of a using feeling and the rinse effect was obtained, and this invention was completed.

[0007] ***** and this invention contain the (A) oily component, the (B) nonionic surfactant, and the (C) cationic surfactant, and content of water provides a hair rinsing agent composition which is 15 or less % of the weight.

[0008]

[Embodiment of the Invention] What it will not be restricted as an oily component of the ingredient (A) used by this invention especially if used for the usual cosmetics etc., for example, is shown below is mentioned.

[0009] Oil and fat : (1) Soybean oil, jojoba oil, an avocado oil, oil of almonds, olive oil, Synthetic triglyceride, such as the hydrogenated oil and myristic acid glyceride which are produced by hydrogenating natural oil fat, such as cacao oil, sesame oil, a par chic oil, castor oil, palm oil, a mink oil, beef tallow, and lard, and these natural oil fat, and 2-ethylhexanoic acid glyceride etc.

[0010](2) Lows : a carnauba wax, spermaceti wax, yellow bees wax, lanolin, etc.

(3) Hydrocarbon : a liquid paraffin, vaseline, paraffin microcrystallin wax, a ceresin, squalane, pristane, etc.

(4) Higher fatty acid group : lauric acid, myristic acid, pulmitic acid, stearic acid, behenic acid, oleic acid, linolic acid, linolenic acid, lanolin acid, isostearic acid, etc.

[0011](5) Higher alcohol : lauryl alcohol, cetyl alcohol, stearyl alcohol, oleyl alcohol, lanolin alcohol, cholesterol, 2-hexyldecanol, etc.

[0012](6) Ester species : octanoic acid Sept Iles, lactic acid Millis Chill, lactic acid Sept Iles, myristic acid isopropyl, myristic acid Millis Chill, pulmitic acid isopropyl, adipic acid isopropyl, butyl stearate, oleic acid decyl, and cholesterol isostearic acid.

[0013]Oil refinement : (7) Mentha oil, jasmine oil, camphor oil, a cypress oil, oil of bitter orange, The Lieu oil, spirit of turpentine, cassia and cinnamon oil, bergamot oil, a mandarin orange oil, a Japanese iris oil, Pine oil, lavender oil, bay oil, a clove oil, hiba oil, the attar of rose, eucalyptus oil, All [GERA / lemon oil, the thyme oil, peppermint oil, rose oil, sage oil, menthol, cineol, eugenol, citral, citronellal, borneol, linalool, and], camphor, Timor, spilantol, pinene, limonene, a terpene series compound, etc. Silicone oil : (8) Dimethylpolysiloxane, a methylphenyl polysiloxane, Amino modifying silicone, fatty acid modified polysiloxane, denaturing alcohol silicone, fatty alcohol modified polysiloxane, polyether denaturation silicone, epoxy denaturation silicone, fluoride denaturation silicone, cyclic silicone, alkyl modification silicone, etc.

[0014]A thing insoluble [to water] among these oily components or refractory is preferred, and silicone oil, such as higher alcohol; dimethylpolysiloxane, such as liquid paraffin; cetyl alcohol and stearyl alcohol, and amino modifying silicone, etc. are especially preferred.

[0015]It is preferred to be able to use combining one sort or two sorts or more, and to blend 20 to 60% of the weight during a total presentation, and when the oily component of an ingredient (A) is blended especially further 40 to 50% of the weight 30 to 55% of the weight, it is preferred at **.

[0016]As a nonionic surfactant of an ingredient (B) used by this invention, Especially if used for the usual cosmetics etc., will not be restricted, but For example, glycerin mono- fatty acid ester, Glycerin difatty ester, propylene glycol fatty acid ester, A sorbitan fatty acid ester, polyoxyethylene sorbitan fatty acid ester, Tetraoleic acid polyoxyethylene sorbitol, polyoxyethylene alkyl ether, Polyoxyethylene polyoxypropylene glycol, polyoxyethylene polyoxypropylene alkyl ether, polyethylene glycol fatty acid ester, polyoxyethylene castor oil, polyoxyethylene hydrogenated castor oil, polyglyceryl fatty acid ester, etc. are mentioned.

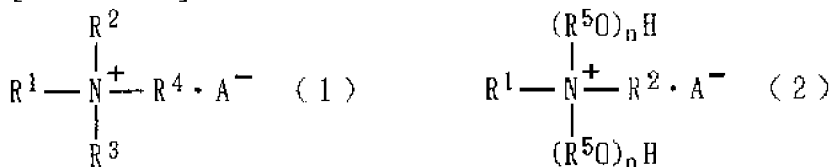
[0017]Glycerin mono- fatty acid ($C_4 - C_{10}$) ester, GURISERINJI fatty acid ($C_4 - C_{10}$) ester, and polyoxyethylene sorbitan fatty acid ester (especially thing of HLB 8-13) are especially preferred among these nonionic surfactants. It is preferred to use combining polyoxyethylene sorbitan fatty acid ester, and glycerin mono- fatty acid ester and/or glycerin difatty ester.

[0018]It is preferred to be able to use combining one sort or two sorts or more, and to blend 20 to 70% of the weight during a total presentation, and if the nonionic surfactant of an ingredient (B) is blended further 40 to 50% of the weight 30 to 60% of the weight, since self-emulsification will stabilize it more especially, it is preferred.

[0019]As a cationic surfactant of an ingredient (C) used by this invention, what is expressed with the following general formula (1), (2), or (3), for example is mentioned.

[0020]

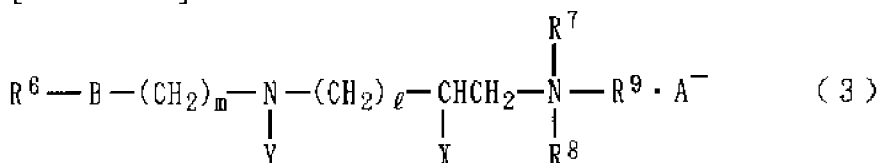
[Formula 1]



[0021](R¹ among a formula the alkyl group or alkenyl group of the straight chain of the carbon numbers 8-22, or branched chain) [show and] R² shows the alkyl group or alkenyl group of the straight chain of a hydrogen atom, a methyl group, an ethyl group, or the carbon numbers 8-22, or branched chain, R³ and R⁴ show a hydrogen atom, a methyl group, or an ethyl group, respectively, R⁵ shows the alkylene group of the carbon numbers 2-3, A shows a halogen atom or an organic anion group, and n shows the number of 1-10.

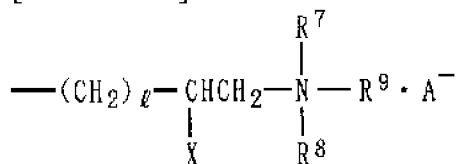
[0022]

[Formula 2]



[0023](R⁶ among a formula the alkyl group or alkenyl group of the carbon numbers 7-35 of a straight chain or branched chain) [show and] R⁷, R⁸, and R⁹ are the same or different, The alkyl group, hydroxyalkyl group, or hydrogen atom of the carbon numbers 1-4 is shown, B -CONJ- (J shows the alkyl group or hydroxyalkyl group of a hydrogen atom or the carbon numbers 1-3), -O- or -COO- is shown and Y is an alkyl group of the straight chain of a hydrogen atom, hydroxyl, and the carbon numbers 1-36, or branched chain, an alkenyl group, a hydroxyalkyl group, or a formula. [0024]

[Formula 3]



[0025]It comes out, the basis expressed is shown, X shows a hydrogen atom or hydroxyl, m shows the number of 2 or 3, and l shows the integer of 0, or 1-5. However, in the case of l= 1, A X indicates a hydrogen atom or hydroxyl to be, and X indicates a hydrogen atom to be in the case of l= 0, and 2, 3, 4 and 5 is the same as the above.

[0026]Trimethylmono stearyl ammonium chloride and dimethyldi stearyl ammonium chloride are especially preferred among these cationic surfactants.

[0027]As for a cationic surfactant of an ingredient (C), it is preferred to be able to use combining one sort or two sorts or more, and to blend one to 20% of the weight during a total presentation, and it is preferred to blend further three to 10% of the weight two to 15% of the weight especially.

[0028]In a hair rinsing agent composition of this invention, content of water is 15 or less % of the weight during a total presentation, and is 0.1 to 5 % of the weight especially preferably 0.01 to 10% of the weight preferably. If it exceeds 15 % of the weight, emulsification and a deposit of a rinse component will take place, and dispersibility will fall.

[0029]An ingredient used for a hair rinsing agent composition of this invention at the usual hair rinsing agent composition besides said ingredient, For example, pearl-ized agents, such as colorant, such as antiseptics, such as drug effect agents, such as an anti-dandruff agent, an antimicrobial agent, and a vitamin, and paraben, a color, and paints, and glycol ester, various compound perfumes, etc. can be suitably blended in the range which does not spoil an effect of this invention.

[0030]A hair rinsing agent composition of this invention can be manufactured by carrying out mixed stirring of each ingredient, for example by a usual method.

[0031]A hair rinsing agent composition of this invention is thinned with hot water or water, preferably, about 50 to 500 times, is preferably diluted to about 100 to 200 times, and is especially used by applying this to hair. If supplied to hot water or water, said oily component and a nonionic surface active agent will form an emulsified matter, and will be uniformly distributed by hot water or underwater. And the hair rinsing agent composition itself is transparent, if it supplies to hot water or underwater, it will become cloudy, and an oily component can be prevented from floating in the water surface by adjusting loadings of each ingredient, etc.

[0032]

[Effect of the Invention]The hair rinsing agent composition of this invention can blend a rinse component with high concentration, and the high rinse effect is acquired. In order to dilute and use it with hot water or water, it can apply to hair uniformly simple and excels in the durability of a using feeling and the rinse effect.

[0033]

[Example]Next, although an example is given and this invention is explained further, this invention is not limited to these examples.

[0034]The hair rinsing agent composition of the presentation shown in example 1 Table 1 and 2 was manufactured with the conventional method. About the obtained hair rinsing agent composition, the dispersibility and the rinse effect to water were evaluated. A result is shown in Table 1 and 2.

[0035](Valuation method)

(1) Dispersibility to water : 5 ml of hair rinsing agent compositions were added in the water 1l (200 time dilution), and viewing estimated the dispersion state when stirred lightly. "O" and a poor thing were shown for the good thing of the dispersion state as "x."

[0036](2) It pulled up the process in which dip a hair sample and it is made to get used by hand into the hair rinse agent diluent prepared in rinse effect: (1), and out of liquid, and organic-functions evaluation of the smoothness and the softness which are among a stream was carried out on the following standards. [in / immediately / a process]

O; it is dramatically smooth and soft.

O; it is smooth and soft.

**; it is not much smooth and is not soft.

x; it is smooth and is not soft.

[0037]

[Table 1]

成 分 (重量%)	本 発 明 品					
	1	2	3	4	5	6
ラウリルトリメチルアンモニウムクロライド	2.5	2.5				
ステアリルトリメチルアンモニウムクロライド	1.5	1.5	2.5	4	2.5	2.5
ジステアリルジメチルアンモニウムクロライド			1.5		1.5	1.5
セタノール	10		10	10	10	10
ステアリルアルコール		10				
テトラオレイン酸ポリオキシエチレンソルビット (HLB 12)	10	12.5	10	10	10	8
ソルビタンモノラウレート	2.5		2.5	2.5		2
グリセリンモノカプリル酸エステル	30	30	30	30	25	25
グリセリンジカプリル酸エステル	10	10	10	10	15	15
流動パラフィン	33.2	33.2	33.2	33.2	35.7	35.7
シリコーン (KHS-3, 信越シリコーン社製)						
アミノ変性シリコーン (BY16-837, 東レダウコーニング社製)						
パルミチン酸イソプロピル						
ワセリン						
プロピレングリコール						
エタノール						
香料	0.15	0.15	0.15	0.15	0.15	0.15
パラオキシ安息香酸メチル	0.15	0.15	0.15	0.15	0.15	0.15
精製水						
水への分散性	◎	○	◎	◎	○	◎
リンス効果	◎	◎	◎	◎	◎	◎

[0038]

[Table 2]

成 分 (重量%)	本 発 明 品		比 較 品		
	7	8	1	2	3
ラウリルトリメチルアンモニウムクロライド					
ステアリルトリメチルアンモニウムクロライド	2.5	2.5	1.2	0.8	1.2
ジステアリルジメチルアンモニウムクロライド	1.5	1.5		0.4	
セタノール	10	10	3	3	2
ステアリルアルコール					1
テトラオレイン酸ポリオキシエチレンソルビット (HLB12)	8	10			
ソルビタンモノラウレート	2				
グリセリンモノカプリル酸エステル	20	20			
グリセリンジカプリル酸エステル	15	10			
流動パラフィン	33.7	30.7	0.5	0.5	0.5
シリコーン (KHS-3, 信越シリコーン社製)			2	1.9	1.9
アミノ変性シリコーン (BY16-837, 東レダウコーニング社製)		10		0.1	0.1
パルミチン酸イソプロピル	5		0.5		
ワセリン	1			0.5	
プロピレングリコール			2	2	3
エタノール			2	2	
香料	0.15	0.15	0.15	0.15	0.15
パラオキシ安息香酸メチル	0.15	0.15	0.15	0.15	0.15
精製水		5	88.5	88.5	89.5
水への分散性	◎	○	×	×	×
リンス効果	◎	◎	△	△	△

[0039]The hair rinsing agent composition of the presentation shown in the secondary example was manufactured with the conventional method.

[Table 3]

(Ingredient) (% of the weight)

distearyldimethyl ammonium chloride . 1.5 lauryl trimethylammonium chloride . 2.5 Cetanol Ten Tetraoleic acid polyoxyethylene sorbitol (HLB12) Ten Sorbitan monolaurate 2.5 Glycerin monocaprate 40.0 liquid paraffins 33.2 Perfume 0.15 methyl parahydroxybenzoate 0.15[0040]When 5 ml of obtained hair rinsing agent compositions were thrown into 1000 ml of hot water, when this was applied to hair, it

became cloudy uniformly, and hot water could be uniformly applied to the whole hair, and its rinse effect was high and it was excellent [effect] in the durability of a using feeling and an effect.

[0041]The hair rinsing agent composition of the presentation shown in the 3rd example was manufactured with the conventional method.

[Table 4]

(Ingredient) (% of the weight)

distearyldimethyl ammonium chloride . 3 cetanols Ten Tetraoleic acid polyoxyethylene sorbitol (HLB12) Ten Glycerin monocaprate 30 liquid paraffins 26.75 The amino modifying silicone (BY16-837, the Toray Industries Dow Corning make) 20. Methyl parahydroxybenzoate 0.1 Perfume 0.15[0042]

When 5 ml of obtained hair rinsing agent compositions were thrown into 1000 ml of hot water, when this was applied to hair, it became cloudy uniformly, and hot water could be uniformly applied to the whole hair, and its rinse effect was high and it was excellent [effect] in the durability of a using feeling and an effect.

[Translation done.]